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31. The method of claim 1, wherein the initiator further comprises an initiator mixture.

32. The method of claim 1, wherein the polymerized macromer forms a barrier on the cells or tissue.

33. The method of claim 1, wherein the tissue or cell is 5 encapsulated by the polymerized macromer.

34. The method of claim 1, wherein the polymerized macromer comprises a tissue support.

35. The method of claim 34, wherein the support forms a 10 shaped article within the body to serve a mechanical function.

36. The method of claim 35, wherein the support is selected from the group consisting of organ sealants, bone defect sealants, space-fillers for aneurysms, blood vessel interior coatings, vessels, tubes and organ holding strictures. 15

37. The method of claim 2, for inhibiting adhesions of the peritoneal cavity.

38. The method of claim 1, further comprising providing with the macromer solution biologically active organic molecules.

39. A method of forming a polymeric, biocompatible material on a surface, the method comprising:

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applying to the surface a solution of a biodegradable, polymerizable macromer, having a solubility of at least about 1 g/100 ml in an aqueous solution, and comprising at least one water soluble region, at least one degradable region which is hydrolyzable under in vivo conditions, and free radical polymerizable end groups, wherein the polymerizable end groups are separated from each other by at least one degradable region, in the presence of a free radical initiator, and polymerizing the macromer.

40. The method of claim 39 wherein the surface comprises glass.

41. The method of claim 39, further comprising contacting the surface with cells or tissue.

42. The method of claim 41, wherein polymerized macromer forms a coating on the surface which inhibits adhesion to the surface.

43. The method of claim 42 wherein the adhesion of 20 protein, cells or tissue to the surface is inhibited.

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